Tobacco Use

Health Objectives for the Year 2010: Reduce disease, disability, and death related to tobacco use and exposure to secondhand smoke by preventing initiation of tobacco use, promoting cessation of tobacco use, reducing exposure to secondhand smoke, and changing social norms and environments that support tobacco use.

Health Implications

Scientific knowledge about the health consequences of tobacco use has increased greatly since the release of the first Surgeon General's Report on Tobacco in 1964. It is well documented that smoking cigarettes causes heart disease; cancers of the lung, larynx, esophagus, pharynx, mouth, and bladder; and chronic lung disease. Cigarette smoking also contributes to cancer of the pancreas, kidney, and cervix. Consequences of smoking during pregnancy include spontaneous abortions, low birthweight, and sudden infant death syndrome. Use of smokeless tobacco causes a number of serious oral health problems, including cancer of the mouth, gum periodontitis, and tooth loss. Cigar use causes cancer of the larynx, mouth, esophagus, and lung. The life expectancy of people who smoke is decreased by an average 14 years.

These tobacco-related diseases result in over 420,000 deaths among adults in the United States per year, representing more than 5,000,000 years of potential life lost. Direct medical costs attributable to smoking total approximately $50 billion per year. Direct medical costs attributable to smoking during pregnancy are approximately $1.4 billion per year. Smoking during pregnancy is estimated to account for 20% to 30% of low birthweight babies. As much as 14% of pre-term deliveries are a result of a mother's smoking, and smoking accounts for up to 10% of all infant deaths.

In Nebraska, more than 2,700 people annually lose their lives as a result of tobacco use. Additionally, hundreds of millions of dollars are drained from the state's economy each year through medical costs, lost productivity, and property damage. Even more disturbing than these statistics is the fact that 35,000 Nebraska children currently younger than 18 will die prematurely from tobacco use.

Exposure to secondhand smoke (environmental tobacco smoke, or ETS) has serious health consequences. Researchers have identified more than 4,000 chemical compounds in tobacco smoke; of these, at least 43 cause cancer in humans and animals. Each year, an estimated 3,000 nonsmoking

Table 1. Tobacco Use Indicators

	Lancaster Recent	Lancaster Objective 2010	Nebraska Recent	Nebraska Objective 2010	National Recent	National Objective 2010[1]
Percent of adults (18 and older) who smoke cigarettes	22.5[2]	13.0	22.0[3]	--	24.7[4]	13.0
Percent of young people in grades 9–12 who smoked cigarettes in the last 30 days	38.0[5]	15.0	39.0[6]	--	36.4[7]	21.0
Average age of first tobacco use by young people in grades 9–12	12.4[5]	14.0	--	--	12.4[8]	13.4
Percent of children who are regularly exposed to tobacco smoke at home	19.4[2]	<15.0	--	--	27.0[9]	<15.0
Percent of women who smoke cigarettes during pregnancy	15.8[10]	2.0	16.3[11]	--	13.2[12]	2.0
Percent of workplaces (50 or more employees) with a formal smoking policy that prohibits smoking in the workplace	--[13]	100.0	--	--	50.0[14]	100.0
Percent of persons who smoke and received advice to quit smoking by a health provider	--[15]	95.0	--	--	61.0[16]	95.0

Americans die of lung cancer because of exposure to ETS. In addition, 150,000 to 300,000 children suffer from lower respiratory tract infections as a result of exposure to ETS. ETS is also linked to heart disease among adults. According to a 1996 study, 21.9% of U.S. children and adolescents under age 18 (approximately 15 million youth) were exposed to ETS in their homes. ETS is more prevalent than is readily recognized. A 1996 study found that among non-tobacco users, 87.9% showed evidence of exposure to ETS, yet only 37% were aware that they had been exposed.

Current Status and Trends

The prevalence of smoking among adults declined steadily from the mid 1960s through the 1980s. This decline appears to have been based on widespread educational and public health efforts beginning with the publication of the 1964 Surgeon General's Report. However, smoking among adults leveled off in the 1990s. The prevalence of smoking among adults nationally in 1995 was 24.7%. The Nebraska rate in 1997 was 22%, and the Lincoln–Lancaster County rate was 21%. Both state and local adult tobacco-use rates have essentially remained constant in the second half of the decade.

Scientific evidence indicates that tobacco use and addiction usually begins in adolescence and that tobacco use may increase the probability that an adolescent will use other drugs. Nearly 90% of people who smoke started before age 18. Consequently, preventing tobacco use among youth has become a major focus of tobacco-control programs nationally and is a primary goal of Nebraska's and Lincoln–Lancaster County's tobacco programs.

Development and implementation of effective comprehensive community-based strategies to prevent children from starting to use tobacco is critical. After experiencing decreases in youth tobacco use in the 1970s and 1980s, the rate at which children use tobacco has steadily increased in the 1990s. Data from the Centers for Disease Control and Prevention (CDC) Youth Risk Behavior Survey (YRBS) reveal that past-month smoking among 9th to 12th graders rose from 27.5% in 1991 to 36.4% in 1997. The 1997 Nebraska YRBS shows that 39% of this same age group used tobacco within the past month. In Lincoln–Lancaster County the rate was 39.3% for females and 36.4% for males for a combined rate of 38%. This is the first time in the history of the YRBS at Lincoln-Lancaster County that the female tobacco-use rate has been higher than the male rate.

Use by adolescents of smokeless tobacco and cigars has also been steadily rising during the 1990s. Nationally, the past-month smokeless tobacco rate among 9th to 12th graders was 9.3% in 1997 (15.8% among males and 1.5% among females). The past-month cigar rate for the same year and same age group was 22% (31.2% males and 10.8% females). The 1997 smokeless tobacco- use rate among adolescents in Nebraska was 17.1% and in Lincoln-Lancaster County was 12.0%.[1]

Determinants of Initiation of Tobacco Use Among Youth

The five key stages of initiation and establishment of tobacco use among young people are:

1. forming attitudes and beliefs about tobacco
2. first trying tobacco
3. continuing experimentation with tobacco
4. regularly using tobacco
5. becoming addicted to tobacco

Youth are put at increased risk of initiating tobacco use by sociodemographic, environmental, and personal factors. Sociodemographic risk factors include coming from a family with low socioeconomic status. Environmental risk factors include accessibility and availability of tobacco products, cigarette advertising and promotion, price of tobacco products, perceptions that tobacco use is normal, peers' and siblings' use and approval of tobacco, and lack of parental involvement. Personal risk factors include a lower self-image, the belief that tobacco use provides a benefit, and lack of ability (or desire) to refuse offers to use tobacco.

Cigarette advertising plays an important role by affecting young people's perceptions of the pervasiveness, image, and function of smoking. The Food and Drug Administration's (FDA's) 1996 tobacco regulation concluded that although advertising may not be the most important factor in a child's decision to smoke, it is a substantial contributing factor. Brand preference data indicate that teens are nearly three times more likely than adults to smoke the most heavily advertised brands of cigarettes. Besides advertising, the glamorization of tobacco use by the entertainment media also appears to influence teen attitudes about tobacco use.

The price of tobacco products has a large impact on youth smoking. Many studies demonstrate that increases in the price of tobacco products reduce the use of both cigarettes and smokeless tobacco among adults and youth. Economic studies show that a 10% increase in the price of cigarettes will reduce overall smoking among adults by about 4% and among teens by at least 7%. In Nebraska, an aggressive statewide effort is underway to significantly increase the tax on tobacco products.

Young people report many reasons for smoking: to improve their image, especially to impress peers and achieve a sense of identity; to help cope with stress; and to achieve a sense of belonging. These themes are reinforced by the images of tobacco advertising that portray smoking as a popular part of a positive, active, and fun lifestyle. Addiction and the physiological/drug effects of nicotine also are cited by young people as reasons to continue to smoke. In addition, young people report that parents and family have an enormous impact on youth smoking, due both to modeling smokers in the family and to stress related to the family.

Determinants of Maintenance of Tobacco Use

The principal reason for continuation of tobacco use is the addictive nature of tobacco, and that addiction occurs in most smokers during adolescence. A study of high school seniors showed that 44% of daily smokers believed that in five years they would not be smoking, but a follow-up study showed that five to six years later 73% of these persons remained daily smokers. In 1995, 68.2% of current smokers wanted to quit smoking completely. However, estimates indicate that only 2.5% of smokers stop smoking permanently each year.

Tobacco Control Interventions

The focus of efforts to reduce tobacco use in the United States has shifted from smoking cessation for individuals to population-based interventions that emphasize prevention of initiation and reduction of exposure to ETS. This change of emphasis from individual behavior to population-based strategies has come about because tobacco use appears to be susceptible to changes in the social environment.

Evidence from California and Massachusetts has shown that comprehensive programs can be effective in reducing tobacco consumption. Both states increased their cigarette excise taxes and

designated a portion of the revenues for comprehensive tobacco-control programs. Data from these states indicate that:

1. Increasing excise taxes on cigarettes is one of the most cost-effective short-term strategies to reduce tobacco consumption among adults and to prevent initiation among youth.
2. The ability to sustain this reduction in per capita consumption is greater when the tax increase is combined with an aggressive antismoking campaign.

There are six key components of tobacco-use prevention and control interventions:

1. prevention and restriction of minors' access to tobacco
2. treatment of nicotine addiction
3. reduction of exposure to secondhand smoke
4. counteradvertising and promotion
5. economic incentives
6. product regulation

Health Disparities

National data from 1995 reveal several disparities in smoking prevalence among adults. Men (27.0% smoking prevalence) are significantly more likely to smoke than women (22.6%). American Indians/Alaska Natives (36.2%) are more likely to smoke than other racial and ethnic groups. Individuals aged 25 to 44 are more likely to smoke (28.6%) than other age groups. Those with 9 to 11 years of education (37.5%) have significantly higher levels of smoking than individuals with either 0 to 8 years of education or 12 years or more; individuals with 16 or more years of education have the lowest smoking rates (14%). Individuals below the poverty level are significantly more likely to smoke than individuals at or above the poverty level (32.5% vs. 23.8%)

Among adolescents, smoking rates differ between Whites and African Americans. In the 1980s, African-American youth showed markedly lower rates of smoking with rates among white teens more than triple those of African-American teens. In recent years, smoking has started to increase among African-American male teens, but African-American female teens continue to have smoking rates considerably lower. Data from the national YRBS indicate that in 1997, 40% of White high school females were smokers compared to 17% of African-American high school females.

Smokeless tobacco use among adolescents also differs significantly by students' gender and race. In 1997, 15.8% of male high school students used smokeless tobacco, compared to only 1.5% of female high school students. Smokeless tobacco-use rates were 12.2% for non-Hispanic Whites, 2.2% for African Americans, and 5.1% for Hispanics.

Public Health Infrastructure

Each year tobacco use kills more than 2,700 Nebraskans and drains $432 million from the economy. Tobacco-related Medicaid expenses alone cost taxpayers almost $40 million every year. The public health community is coming together as never before to fight this number one preventable cause of death and illness, tobacco. Tobacco Free Coalitions have been established in 12 communities throughout the state, including the Tobacco Free Lincoln

Coalition; health agencies are joining forces to introduce and pass legislation to protect the public from environmental tobacco smoke and to increase the tax on tobacco; and communities are creating comprehensive programs to prevent children from starting to use tobacco. Local health departments have the opportunity to be leaders in implementing comprehensive tobacco prevention plans that address the Four A's of tobacco control: *access*, *appeal*, *affordability*, and *clean air*. The CDC's August 1999 guide, "Best Practices for Comprehensive Tobacco Control Programs," and the Smokeless Nebraska Coalition's November 1999 "Combatting Tobacco Use In Nebraska" provide excellent guidance in developing such comprehensive plans. The Lincoln–Lancaster County Health Department has established itself as an aggressive force in the war on tobacco and will continue to work closely with Nebraska Health and Human Services; Health Education, Inc.; the Lancaster County Medical Society; the Nebraska Dental Association; the American Heart Association; the American Cancer Society; the American Lung Association; the Nebraska Heart Institute, local schools, churches, and health agencies; and others to decrease the rate at which children start to use tobacco and to protect the public from ETS.

It will be necessary to seek funds to create an effective and comprehensive community-wide approach to tobacco prevention, education, and cessation. The Smokeless States Coalition's guide, "Combatting Tobacco Use In Nebraska," suggests that full funding of a comprehensive program requires $14.17 per person, which translates into an annual $3,000,000 necessary for Lincoln. A potential source of funds locally is from the Lincoln Community Endowment. An obvious source of funding at the state level should be from the Health Care Trust Fund, in which monies received by Nebraska from the national tobacco settlement will be deposited.

Recommendations

Implement a community-wide multistrategy approach to reduce the rate at which youth begin to use tobacco and to ensure clean air. This approach will focus on changes in social norms and environments that support tobacco use, policy and regulatory strategies, community participation, strategic use of media, development of local programs, coordination of statewide and local activities, linkage of school-based activities to community activities, and use of surveillance and evaluation techniques to monitor program impact. Specific aspects of this approach include:

- Continue to work with the statewide effort to increase the tax on tobacco significantly enough (by a minimum of 10%) to decrease sales and consumption among both youth and adults.
- Help public and parochial schools implement evidence-based tobacco prevention and education curriculum for grades K–12.
- Work closely with the schools that are part of the Comprehensive School Health Initiative to help them address the youth risk behavior of tobacco use.
- Continue to assist the Lincoln Police Department in conducting compliance checks of tobacco retailers to achieve the goal of no more than a 5% illegal sales rate.
- Involve businesses in the effort to decrease youth and employee tobacco use by encouraging the businesses to implement, promote, and enforce strong clean indoor air policies that comply with the Nebraska Clean Indoor Air Act.

- Encourage all health care providers, including physicians, dentists, and allied health personnel, to ask patients and clients about personal tobacco use, strongly encourage cessation, and provide information on quitting.
- Implement a smoke-free workplace ordinance.
- Enlist media to assist with public education campaigns emphasizing clean indoor air.
- Encourage administrators of health plans to offer treatment of nicotine addiction as part of the health plan provisions.
- Create and implement aggressive counter-advertising campaigns to combat the tobacco industry's extensive advertising and promotion.
- Make cessation programs and support groups widely available and accessible to all desiring such a program, including youth and uninsured/underinsured individuals.

Notes

Related discussion or indicators are located in the chapters on *Maternal and Child Health*, *Healthy Children*, *Chronic Disease*, *Oral Health*, and *Clean Indoor Air*.

Table 1

-- Currently no data source.

1. U.S. Dept. of Health and Human Services. *Healthy People 2010 Objectives: Draft for Public Comment*.
2. Lincoln–Lancaster County Health Dept., Behavioral Risk Factor Survey 1999.
3. Nebraska Health and Human Services System, *Behavioral Risk Factor Surveillance System Report*, 1995–96.
4. U.S. Dept. of Health and Human Services, *Healthy People 2010 Objectives: Draft for Public Comment*. Data from the National Health Interview Survey, 1995.
5. Lincoln–Lancaster County Health Dept., Youth Risk Behavior Survey, 1997.
6. The Buffalo Beach Company, *The 1997 Youth Risk Behavior Survey*, Summary Tables of Nebraska Data, 1997.
7. 1997 Youth Risk Behavior Surveillance Data, *MMWR*, vol. 47, no. SS-3.
8. U.S. Dept. of Health and Human Services, *Healthy People 2010 Objectives: Draft for Public Comment*. Data is for youth aged 12–17, from the National Household Survey on Drug Abuse, 1996.
9. U.S. Dept. of Health and Human Services, *Healthy People 2010 Objectives: Draft for Public Comment*. Data from National Health Interview Survey, 1994.
10. Lincoln–Lancaster County Health Department, Vital Statistics, 1998.
11. Nebraska Health and Human Services System, *Nebraska Vital Statistics Report*, 1998.
12. National Center For Health Statistics, *National Vital Statistic Report*, vol. 47, no. 18. U.S. births data, 1997.
13. Currently no data source. Business survey of smoking policies would need to be developed.
14. U.S. Dept. of Health and Human Services, *Healthy People 2010 Objectives: Draft for Public Comment*. Data from the National Survey of Worksite Health Promotion Activities, 1992.
15. Currently no data source. Could be obtained from a community health survey.
16. U.S. Dept. of Health and Human Services, *Healthy People 2010 Objectives: Draft for Public Comment*. 1996 data from the Health Plan Employer data and information set.

Narrative source

1. The Buffalo Beach Company, *The 1997 Youth Risk Behavior Survey*, Summary Tables of Nebraska Data, 1997. In response to the question "Have you ever used chew or snuff in the past 30 days?"